Request for Comments
Number: 720
NIC # 36337
References: RFC #680

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5 August 76

Address Specification Syntax for Network Mail

Experience with processing mail on the Arpanet has pointed up many addressing issues, including:

1. People's names are not the same as their addresses;

2. Mailing lists can get quite long;

3. To allow responding, messages often need to carry all of their mailing list with them;

4. It would be very useful to be able to send mail to files other than the person's primary mailbox.

The current mail syntax, specified in RFC 680, does not provide a convenient mechanism for distinguishing between a person's name and their mailing address. In cases of shared directories, the ATTN: clause is marginally adequate; however it is completely inappropriate for single-user mailboxes in which the address specification is simply cryptic. CMU's identification tags are good examples of this problem, since they tend to appear to be random character sequences; the use of initials as tags also points up the problem. If you doubt the referential ambiguity of addresses, then try to use only the information presented, rather than random personal knowledge, to discern who Micro@ISI, JFH@ISI, or Greep@ISD are. By having a formal syntax for separately specifying names and addresses, mail display software can printout out name lists which only contain human names...makes things friendlier.

The problem with long mailing lists is that, if included in the text of a message, they often are longer than the main part of the message. Group names are allowed in address fields primarily to circumvent this problem. However the advent of semi-automated message answering, in which a receiver's message system prepares address lists for reply messages by copying appropriate fields from the original message, makes the current mechanism deficient: having the group name means that the receiver does not have the names/addresses of the members of the group. A convention is generally followed, now, which has the group name be a pathname to the file containing the list. Though facilitative, this does not represent an adequate solution.

And lastly is the issue of multiple mailboxes for a single user. This feature is probably has the largest potential for teleconferencing applications, with messages for an on-going discussion automatically placed into a separate mailbox. In the case of shared directories, this mechanism also would allow easy channeling into each person's own mailbox.

With these needs in mind, and until a more robust mail syntax and protocol is specified, the following general syntax is proposed to augment the existing syntax specified in RFC 680, for address fields specified by the user:

Name:(Person(User-Id(Mailbox) at Host),...); ...

where

"Name" is the name of the mailing list; "Person" presumably is the name of the person receiving the mail;

"User-Id" is their online reference name (usually their signon directory);

"Mailbox" is a a secondary mailbox/file;

and the rest conforms to RFC 680, although "@" may be used in place of " at " in thesspecification.

Parentheses may be replaced by other bracketing pairs ([], {}, <>). Quotation marks must be used any time the string contains ambiguating characters, such as space or parentheses. The brackets after Name are used to request exclusion of the address list from the message, instead using text which gives the pathname to the source of the list.

The formal syntax for address specification, within network mail actually sent, is included in the next section.

Not all of a specification is required, so perhaps some examples will clarify things:

A normal specification, as used currently: Walker at ISI

A named list, to be carried with the message, with the last address not a member of the list: List:Walker at ISI,greep@rand-isd;Action@ISI

A named list, NOT to be carried with the message; the list contents will be replaced with a text string indicating the source

of the list -- not very useful if the list is typed in by the user, rather than pulled from a file; therefore List:(Walker@ISI,greep at rand); Action at ISI will be changed to appear in the message as List:("/rnd/dcrocker/mail.list"); Action at ISI

A list with personal names, separate from addresses: "Steve Walker"[Walker at ISI], Bob<rha@isd>

A teleconferencing address list:
Talkers:"Dave C"(DCrocker(TC.msg)@isi),...;

Formal Specification

The following modified BNF is to serve as a direct addition/replacement for specifications within RFC 680. The fields eliminated from the existing specification are: <addressee item>, <adress list>, <addressee>, <mailbox>, <host spec>, <attention spec>, <user list>, <mailbox group>, <group numbers>, and <mailbox list>.

<Attention spec> can be performed through use of the person's name and secondary file specification. Also, <Sender> should be modified to be:

Sender = "SENDER: " Individual

And the added fields are:

Address-Field = Address-List / Address-List ";" Address-Field

Address-List = Individual-List / Group-List

Group-List = Group-Name Group-Members

Group-Name = / Name ":"

Group-Members = Individual-List / L-Bracket Pathname R-Bracket

Pathname = {A Name which can at least provide a human with enough information to find the file containing the Group-List }

Individual-List = Individual / Individual "," Individual-List

Individual	=	Mailbox / Name L-Bracket Mailbox R-Bracket
L-Bracket	=	"(" / "[" / "{" / "<"
R-Bracket	=	")" / "]" / "}" / ">"
Mailbox	=	Id Secondary-File At Host
Id	=	Name
At	=	" at " / "@"
Host	=	{An acceptable host name ⅗ ✓
Secondary-File	=	/ L-Bracket Filename R-Bracket
Filename	=	Name
Name	=	{An Ascii string without carriage return, line feed, space, '"', ",", ";", or any L-Bracket or R-Bracket} / '"' {An Ascii string with any double-quotation marks doubled} '"'

The particular L-Bracket and R-Bracket characters used must match each other. The requirement for quotation marks has been made more severe than absolutely necessary in order to simplify software requirments. Note also that the above specified syntax is for inter-entity communications and is not necessarily indicative of what the user types.

EKM

GAS-DAT

USER

LASA.MSG

ATSW.MSG